

IN THE CLAIMS:

Please amend claims 1, 8 and 14 as follows wherein insertions are underlined and deletions are indicated with strikethrough or double brackets. This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended). A rotary steering damper for a motorcycle, said steering damper comprising;

a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

a hydraulic pressure control valve for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, working fluid flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is adapted to be attached to one of a vehicle body frame side and a steering system side while said shaft is adapted to be attached to the other of said vehicle body frame side and said steering system side, and said housing is adapted to be disposed above a top bridge;

wherein said damper housing comprises a housing extension which extends rearwardly

bchind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, ~~the entirety of said actuator being disposed below said housing extension;~~ the actuator disposed such that an upper surface of said actuator is secured to a lower surface of the housing extension, the lower surface extending in a direction normal to an axis of the shaft.

Claim 2 (previously presented). A rotary steering damper according to claim 1, wherein said housing is adapted to be attached to said vehicle body frame side, and said shaft is adapted to be attached to said steering system side.

Claim 3 (original). A rotary steering damper according to claim 1, wherein the actuator comprises an electric solenoid.

Claim 4 (original). A rotary steering damper according to claim 1, wherein said housing comprises a base and a lid removably attached to the base.

Claim 5 (previously presented). A steering damper kit for use with a motorcycle, said kit comprising, a rotary steering damper, said steering damper comprising;

a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for

concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

a hydraulic pressure control valve for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, working fluid flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is adapted to be attached to one of a vehicle body frame side and a steering system side while said shaft is adapted to be attached to the other of said vehicle body frame side and said steering system side, and said housing is adapted to be disposed above a top bridge;

wherein said damper housing comprises a housing extension which extends rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, the entirety of said actuator being disposed below said housing extension, the steering damper kit further comprising a linkage member comprising dual pivot connections, and a bifurcated steering torque transfer arm for connecting between said linkage member and said damper shaft of said steering damper.

Claim 6 (previously presented). A steering damper for a vehicle wherein a pressure control valve is interposed in an oil path formed in a damper housing provided between a vehicle body frame and a steering system such that said pressure control valve is controlled to vary an attenuating force upon operation of said steering system, said pressure control valve comprising:

an electric pressure control valve provided in a connecting oil path for communicating an exit side oil path into which working fluid is discharged from an oil chamber of said damper

housing and an entrance side oil path along which the working fluid returns to said oil chamber and operable to change the attenuating force upon operation of said steering system in accordance with an electric signal; and

a mechanical pressure control valve provided in a bypass oil path provided in parallel to said electric pressure control valve in such a manner as to open when the pressure in said bypass oil path becomes equal to a predetermined value,

wherein a maximum opening pressure of said electric pressure control valve is set so that a lower limit value to a dispersion thereof

is higher than a lower limit value to a dispersion of an opening pressure of said mechanical pressure control valve, and

is lower than an upper limit value to a dispersion of an opening pressure of said mechanical pressure control valve.

Claim 7 (canceled).

Claim 8 (currently amended). A motorcycle, comprising a frame having a head pipe with an integral flange extending rearwardly from a top portion thereof, and a steering column pivotally attached to said head pipe, said motorcycle further comprising a rotary steering damper comprising;

a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

a hydraulic pressure control valve disposed in said damper housing for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, oil flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is attached to one of a vehicle body frame side and a steering system side of said motorcycle, while said shaft is attached to the other of said vehicle body frame side and said steering system side, and said housing is disposed above a top bridge of said motorcycle;

wherein said damper housing further comprises a housing extension which extends rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, the entirety of said actuator being secured to a lower surface of the housing extension, the lower surface extending in a direction normal to an axis of the damper shaft.

Claim 9 (original). The motorcycle of claim 8, wherein said damper housing is attached to said vehicle body frame side, and said shaft is attached to said steering system side.

Claim 10 (original). The motorcycle of claim 8, wherein the actuator comprises an electric solenoid.

Claim 11 (original). The motorcycle of claim 8, wherein said damper housing comprises a base and a lid removably attached to the base.

Claim 12 (previously presented). A motorcycle, comprising a frame having a head pipe with an integral flange extending rearwardly from a top portion thereof, and a steering column pivotally attached to said head pipe, said motorcycle further comprising a rotary steering damper comprising;

a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

a hydraulic pressure control valve disposed in said damper housing for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, oil flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is attached to one of a vehicle body frame side and a steering system side of said motorcycle, while said shaft is attached to the other of said vehicle body frame side and said steering system side, and said housing is disposed above a top bridge of said motorcycle;

wherein said damper housing further comprises a housing extension which extends

rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, said actuator being disposed below said housing extension, the rotary steering damper further comprising a linkage member comprising dual pivot connections, and a bifurcated steering torque transfer arm connecting said linkage member and said damper shaft of said steering damper.

Claim 13 (original). The motorcycle of claim 8, further comprising a plurality of brackets situated between the steering damper and the flange on the head pipe.

Claim 14 (currently amended). A rotary steering damper for a motorcycle steering system, said steering damper comprising;

- a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

- a damper shaft attached to and extending downwardly from said damper housing;

- a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

- a hydraulic pressure control valve for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, working fluid flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is adapted to be attached to one of a vehicle body frame side

and a steering system side while said shaft is adapted to be attached to the other of said vehicle body frame side and said steering system side, and said housing is adapted to be disposed above a top bridge;

wherein said damper housing comprises a housing extension which extends rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, said actuator being disposed below said housing extension such that an upper surface of the actuator underlies a lower surface of the damper housing, the lower surface of the damper housing extending in a direction that is substantially normal to an axis of the shaft.

Claim 15 (previously presented). A rotary steering damper for a motorcycle steering system, said steering damper comprising;

a damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

a hydraulic pressure control valve for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, working fluid flows between the left and right oil chambers to generate attenuating force,

and wherein said housing is adapted to be attached to one of a vehicle body frame side

and a steering system side while said shaft is adapted to be attached to the other of said vehicle body frame side and said steering system side, and said housing is adapted to be disposed above a top bridge;

wherein said damper housing comprises a housing extension which extends rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, said actuator being disposed below said housing extension such that an upper surface of the actuator underlies a lower surface of the damper housing, the rotary steering damper further comprising a linkage connecting the damper shaft to said steering system side,

the steering system side comprising a top bridge fixed to both a steering column and handlebars;

the linkage includes a steering torque transfer arm and a link member;

wherein a first end of the steering torque transfer arm is fixed to the damper shaft, a second end of the steering torque transfer arm is rotatably attached to a first end the link member, and a second end of the link member is rotatably attached to the top bridge,

wherein movement of the handlebars causes a rotational movement of the top bridge and steering column, and said rotational movement of the top bridge is transferred to the damper shaft via the linkage.

Claim 16 (previously presented). The steering damper of claim 14 wherein the hydraulic pressure control valve varies the attenuating force upon operation of said steering system, and said hydraulic pressure control valve comprises:

an electric pressure control valve operable to change the attenuating force upon operation of said steering system in accordance with an electric signal; and

a mechanical pressure control valve provided in parallel to said electric pressure control valve.

Claim 17 (previously presented). The steering damper for a vehicle of claim 6, wherein said steering damper comprises:

said damper housing having an oil chamber formed therein and having a plurality of fluid flow channels in fluid communication with said oil chamber;

a damper shaft attached to and extending downwardly from said damper housing;

a vane disposed in the oil chamber of the housing and attached to the shaft for concurrent pivotal movement therewith, said vane operating to effectively partition the housing oil chamber into left and right oil chambers; and

said pressure control valve for varying an attenuating force of said steering damper;

wherein, upon pivotal rocking motion of said vane in said housing, working fluid flows between the left and right oil chambers to generate attenuating force;

wherein said housing is adapted to be attached to one of the vehicle body frame and the steering system while said shaft is adapted to be attached to the other of said vehicle body frame and said steering system, and said housing is adapted to be disposed above a top bridge; and

wherein said damper housing comprises a housing extension which extends rearwardly behind said top bridge; and wherein said steering damper further comprises an actuator for said hydraulic pressure control valve, said actuator being disposed below said housing extension such that an upper surface of the actuator underlies a lower surface of the damper housing.

Claim 18 (canceled).